XIV. ANNEALING AND HEATING FURNACES FOR BOILER PLATES

Fig. 104 shows an annealing or heating furnace for boiler plates. The downdraft principle is widely used in these furnaces. They work in a very satisfactory manner, but have the great disad-

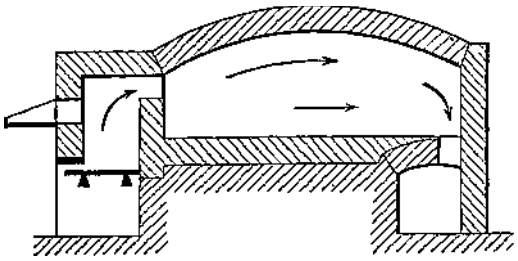

FIG. 104.

vantage that only one plate can be heated at a time, if it covers the entire hearth of the furnace. Accordingly the output of these furnaces is very small and the consumption of fuel is excessively high. If an attempt is made to heat several plates at a time in this furnace by placing one on top of the other in a pile, the heating is irregular and not uniform, as the waste gases cannot be drained

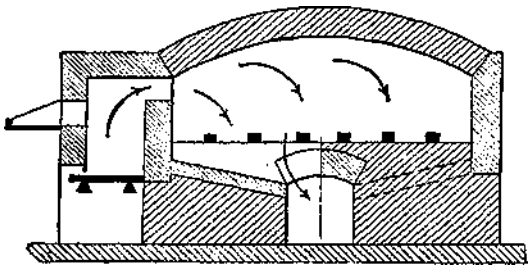

FIG. 105.

away from the heating chamber as they are cooled in giving up their heat to the charge. In order to secure a rapid and uniform heating of several plates at a time, provision must be made for the cooled gases to flow out of the heating chamber as rapidly as they give up their heat. Fig. 105 shows a plate heating furnace con-structed for the purpose of heating several plates

at a time. These plates are piled upon iron skids. The waste-gas outlet is